

short and stout set at a great angle to the axis. Pedicels 5 to 10, pubescent, often glandular. Flowers opening about June 20 noticeably small,  $\frac{3}{4}$  to  $\frac{7}{8}$  in. broad; petals oval, twice as long as wide; sepals woolly, sometimes glandular, mucronate. Fruit irregularly globose, composed of from 5 to 30 drupelets mostly large. Three measured and counted:  $\frac{1}{2}$  in. high by  $\frac{7}{16}$  in. wide, 27 drupelets;  $\frac{9}{16}$  in. by  $\frac{1}{2}$  in., 32 drupelets;  $\frac{5}{8}$  in. by  $\frac{1}{2}$  in., 32 drupelets. Ripening season from August 1 to August 15. Very edible, the crop often good but too much small fruit. Type in Kennebunk, Maine. Abundant in Kennebunk, Kennebunkport and Wells. Also seen in North Berwick, Biddeford and Saco. Dry places, open ground.

This is the most variable plant described in this paper. Its small flowers distinguish it from all the others. Perhaps it should not be put in either class. The cane is small at the base like a dewberry, but its tendency to keep off the ground is so great that it is brought down solely by the weight of the plant, only long canes ever becoming prostrate.

SUPPLEMENTARY NOTE.—The writer has recently found *R. geophilus* in New Bedford, Massachusetts, and *R. plicatifolius* in Burrillville and Gloucester, Rhode Island. An interesting form of *R. recurvans* with dark green leaves and other peculiarities occurs in Connecticut, Rhode Island and Southeastern Massachusetts.

WESTMINSTER, VERMONT.

## NOTES ON ALGAE,— VIII.

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GOBIA BALTICA (Gobi) Reinke, Algenflora der westlichen Ostsee, p. 65; *Cladosiphon Balticus* Gobi, Brauntange der Finnischen Meeresbusens, p. 12, Pl. I, figs. 7–11. Nearly related to *Dictyosiphon*, but the cortical layer is more strongly developed, and takes the form of densely packed, few-celled filaments, at right angles to the axis of the frond; in this layer are imbedded the oval unilocular sporangia, sometimes slightly projecting; and through it issue the hairs. The branches are contracted at the base; the branching is never very abundant, and sometimes the fronds are nearly or quite simple. It



is found in all parts of the Baltic; the first American locality is Newport, R. I., where it was collected by Mrs. W. C. Simmons in June, 1899; since then a specimen has been received from Prof. John Macoun, collected at Louisburg, Nova Scotia. The Rhode Island plant is very little branched, and is of a softer texture than the Nova Scotia plant, or than authentic European specimens; otherwise they are much the same.

MYRIONEMA CORUNNAE Sauvageau, Annales des Sciences Naturelles, Series 8, Bot., Vol. V, p. 237. In general appearance not unlike *M. vulgare* Thuret, this plant is distinguished by the usually very abundant plurilocular sporangia, cylindrical or slightly torulose, 5-7  $\mu$  diameter, 25-120  $\mu$  long, the cross walls often quite oblique, longitudinal divisions occasionally occurring. The sporangia are either sessile on the basal layer, or borne on a one- to four-celled pedicel. They are long and mostly pediceled at the center of the basal disk, becoming shorter and sessile near the margin; usually simple, they are occasionally branched; hairs are found occasionally, but not commonly; unilocular sporangia, so common in *M. vulgare*, are unknown in *M. Corunnae*. Sauvageau found no assimilative filaments, but Jónsson, Botanisk Tidsskrift, Vol. XXV, p. 144, mentions and figures them, in size and shape much like the sporangia, but with longer cells. He describes a variety *filamentosa*, in which the filaments of the basal portion are free, not united into a disk. In material collected in Casco Bay, Maine, all intermediate forms between the type and the variety were found. It occurs also at Wood's Hole, Mass., and at Newport, R. I., in each case on *Laminaria*, on which it is found also in Europe. Distributed as P. B.-A., No. 1234.

LITHODERMA FATISCENS Areschoug, Observationes Phycologicae, part III, p. 23. It is probable that two species, with quite different types of plurilocular sporangia, have been included under this name; the matter has been carefully gone over by Kuckuck, Wissenschaftliche Meeresuntersuchungen, Neue Folge, Vol. I, p. 237, 1894. The plurilocular fruit having never been recorded in America, while the unilocular fruit in the specimens to be noted here agrees with Kuckuck's description and figures, there is little risk in our identification. In habit and general structure it resembles *Ralfsia verrucosa* Aresch., but the cells contain each several small chromatophores, instead of the single large chromatophore of *Ralfsia*; the unilocular sporangia are terminal, each at the end of a vertical filament. While sterile



plants probably belonging here have occasionally been found, in only one instance has fruit been observed in American specimens and the determination made definite; in this case the plant grew on a pebble to which was attached a frond of *Laminaria longicuris* De la Pyl., washed ashore at Revere Beach, Mass., May 8, 1904.

CONCHOCELIS ROSEA Batters, Phyc. Mem., Vol. I, p. 27, Pl. VII. Though less common than the other perforating algae, *Gomontia polyrhiza* (Lagerh.) Born. & Flah., and *Mastigocoleus testarum* Lagerheim, this species is not infrequently met with in dead shells of mollusks, mostly of the heavier kinds, to which it gives a pleasant pink color. By decalcification there is obtained a dense mat of articulate branching filaments, 2–7  $\mu$  diameter, cells varying greatly in length, occasionally expanding to 30  $\mu$  diameter, the expansion containing what is supposed to be a spore, 13–15  $\mu$  diameter. There has been some question as to the position of this genus, and it has been suggested that it may be a variety of *Ostreobium Quekettii* Born. & Flah., but this seems hardly likely, if Batters' description is correct. It has been found at Casco Bay, Maine, and at Revere Beach, Mass.; probably it will be found at other stations.

RHODOMELA LYCOPODIODES (L.) Agardh, Species Algarum, p. 377. This is a characteristic Arctic species extending some distance into the temperate zone on both sides of the Atlantic and Pacific oceans. It is extremely variable in form, and its distinction from the somewhat more southern and also variable *R. subfusca* (Woodw.) Ag. is by no means sharp. The writer found a small scrap of it washed ashore at Harpswell, Maine, in July, 1903; at a visit to the same place in June, 1904, it was quite abundant, but in July, 1904, and July, 1905, was again rare. This would seem to indicate that its season was earlier than that of *R. subfusca*, which is not uncommon, at least in its later stages, on the Maine coast in July. In typical *R. subfusca* the main branches are often nearly naked below, bearing spirally arranged branches of the next order, each order of branches being quite regularly arranged on the branch of the preceding order, the penultimate branches being short, of about the same length, and ending in a dense glomerule of ramuli. In typical *R. lycopodioides* the branching is more irregular and except at the tips more dense, the successive orders of branches less distinct, longer and shorter branches being intermingled; when the branching is dense it is dense throughout, not specially at the tips. Short spindle-shaped branches



are more or less abundant; in *R. subfusca* the ramuli are cylindrical or tapering. Numerous varieties of *R. lycopodioides* are described and figured by Kjellman, *Algae of the Arctic Sea*, p. 107; as all of these, and also the forms of *R. subfusca*, have marked seasonal variations, the result is often confusing. The Harpswell material varies considerably, mostly agreeing with forma *typica* subforma *tenera* Kjellman, some, however, is more like forma *tenuissima*. Distributed as P. B.-A., No. 1295.

RHODOCHORTON PENICILLIFORME (Kjellm.) Rosenvinge, *Annales des Sciences Naturelles*, Series 6, Bot., Vol. XIX, p. 66. Like the nearly allied *R. membranaceum* Magnus, this species grows on *Bryozoa*, *Sertularia* etc., the two species often in company; they are, however, easily distinguished. In *R. membranaceum* the filaments grow freely inside the tubes of the host, sometimes so densely as to form an apparent membrane or cellular mass; rather short branches 6-8  $\mu$  thick break through the wall, and on these the terminal tetraspores are usually borne; in *R. penicilliforme* there is a disk of laterally united radiate filaments on the outer surface of the host; from this arise rather long erect filaments, about 12  $\mu$  diameter, bearing lateral tetraspores. It was found at Newport, R. I., in May, 1904, on a bryozoan attached to a *Laminaria*.

RHODODERMIS ELEGANS Crouan in J. G. Agardh, *Species Algarum*, Vol. II, p. 505. The genus *Rhododermis* was founded on this species, the fronds occurring as small bright red spots on fragments of china and pottery in the harbor of Brest, France. The frond consists of a disk composed of one or two layers of laterally united, radiate filaments; on this disk are formed sori of cruciate tetraspores intermixed with clavate, more or less curved, paraphyses. *R. elegans* has been found at Harpswell, Maine, and at Revere Beach, Mass., in both cases on the shells and claws of live crabs. Distributed as P. B.-A., No. 1248.

RHODODERMIS PARASITICA Batters, *Algae of Berwick-on-Tweed*, p. 92, Pl. XI, fig. 2, A & B. In this species the frond is thicker than in *R. elegans*, appearing in cross section as if composed of densely packed, vertical filaments, with cells longer than broad; the color is darker, almost black. It occurs, both in Europe and with us on stipes of *Laminaria* species, and was found at Magnolia, Mass., by Prof. W. G. Farlow.

RHODODERMIS GEORGII (Batters) Collins, in *Phyc. Bor.-Am.*, No. 1299. *Rhodophyseuma Georgii* Batters, *Journal of Botany*, Vol. XXIX,



p. 377; *Rhododermis Van Heurckii* Heydrich, Beihefte zum Botanischer Centralblatt, Vol. XIV, p. 246, Pl. XVII. The fronds of this species are cushion-shaped, of dense cellular structure, growing chiefly at the edges of *Zostera* blades; they occur also on the surface of the blade, but do not develop as fully as at the edges, where their thickness is such that they sometimes show even to the naked eye as distinct prominences. *R. Georgii* was found abundantly at Wood's Hole, Mass., in April, 1905; has since been found at Harpswell, Maine, Revere Beach, Mass., and Rocky Point, R. I.; probably it occurs in spring all along the coast.

The three species of *Rhododermis* mentioned above are all that have been described in the genus; it is satisfactory to add them all to our flora at the same time.

MALDEN, MASSACHUSETTS.

## SOME NEW OR LITTLE KNOWN CYPERACEAE OF EASTERN NORTH AMERICA.

M. L. FERNALD.

(Continued from page 130.)

**SCIRPUS hudsonianus** (Michx.), n. comb. *Eriophorum alpinum* L. Sp. 53 (1753), not *Scirpus alpinus* Schleicher in Gaud. Fl. Helv. i. 108 (1828). *Linagrostis alpina* Scop. Fl. Carn., ed. 2, i. 48 (1772). *Eriophorum hudsonianum* Michx. Fl. i. 34 (1803). *Trichophorum alpinum* Pers. Syn. i. 70 (1805). *Scirpus Trichophorum* Asch. & Graebn. Syn. ii. ab. 2, 301 (1903).

I have recently discussed this plant at length<sup>1</sup> and the reasons why it should be considered a *Scirpus* rather than an *Eriophorum*. The ruling of the International Congress at Vienna requires the retention of the earliest available specific name, and since there is already a *Scirpus alpinus* of Schleicher, it is necessary to take up Michaux's name which was given to a plant clearly identical with the Linnean *Eriophorum alpinum*.

<sup>1</sup> RHODORA, vii. 131, 132 (1905).